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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,000	07/06/2001	Heiner Jurs	089306-000000US	5128
20350	7590	05/18/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			TRAN, THUY V	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,000

Applicant(s)

JURS ET AL.

Examiner

Thuy V. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment submitted on 02/22/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,4,9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/15/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is a response to the Applicants' amendment filed on February 22nd, 2005. In virtue of this amendment, claim 13 has been cancelled (based on the preliminary amendment filed 07/06/2001), and claims 1-12 are currently presented in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 6-8 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumann (U.S. Patent No. 5,583,334).

With respect to claim 6, Baumann discloses, in Figs. 1-7, a light grid and a corresponding method for operating a light grid to detect objects in a monitoring region [26] (see Fig. 1), in which light signals are transmitted from a transmitter unit [13] comprising a plurality of light transmitters [11₁, ..., 11₇] to a receiver unit [14] comprising a plurality of light receivers [12₁, ..., 12₇], with respective pairs of light transmitters and light receivers associated with one another and bounding the monitoring region [26] being activated in succession in time in dependence on a synchronization signal transmitted between the transmitter unit [13] and the receiver unit [14], characterized in that the synchronization signal is transmitted during operation from the transmitter unit [13] to the receiver unit [14] via changing pairs of light transmitters and light receivers (e.g. 11₂ with 12₂; See Abstract, lines 8-14; Specification, col. 3, lines 4-18 and 39-41) associated with one another.

With respect to claim 7, Baumann discloses, in col. 3, lines 57-61, that when the transmission of the synchronization signal between a first pair of light transmitter and light receiver is interrupted or if such an interruption is due, the transmission of the synchronization signal takes place between a second pair of light transmitter and light receiver.

With respect to claim 8, Fig. 1 of Baumann shows that a first pair consists of the first light transmitter of the transmitter unit [13] and the respective first light receiver of the receiver unit [14]; and/or that a second pair consists of the other last light transmitter of the transmitter unit [13] and the other respective last light receiver of the receiver unit [14].

With respect to claim 11, Baumann discloses, in col. 4, lines 17-36, that the transmission of the synchronization signal takes place in dependence on a fixed or determined direction of object entry into the monitoring region via a first or a second pair of light transmitter and light receiver.

With respect to claim 12, Baumann discloses, in Figs. 1-7, a light grid for detecting objects in a monitoring region [26] having a transmitter unit [13] comprising a plurality of light transmitters [11₁, ..., 11₇] and a receiver unit [14] comprising a plurality of light receivers [12₁, ..., 12₇] in which respective pairs of light transmitters and light receivers associated with one another and bounding the monitoring region are activated in succession in time in dependence on a synchronization signal transmitted between the transmitter unit [13] and the receiver unit [14] (see Fig. 1), characterized in that a control unit [20, 22, 23, 27] (see Fig. 1) is provided for the transmission of the synchronization signal from the transmitter unit [13] to the receiver unit [14] via changing pairs of light transmitters and light receivers (e.g. 11₂ with 12₂; See Abstract, lines 8-14; Specification, col. 3, lines 4-18 and 39-41) associated with one another.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann (U.S. Patent No. 5,583,334).

With respect to claims 1 and 2, Baumann discloses, in Figs. 1-2, a light grid for detecting objects in a monitoring region [26] having a transmitter unit [13] comprising a plurality of light transmitters [11₁, ..., 11₇] and a receiver unit [14] comprising a plurality of light receivers [12₁, ..., 12₇], respective pairs of light transmitters and light receivers (i.e. [11₁] and [12₁], etc.; see Fig. 1) associated with one another and bounding the monitoring region being activated (via control circuits [22, 27]; see Fig. 1; col. 3, lines 4-18 and 43-51) in succession in time in dependence on a synchronization signal transmitted between the transmitter unit [13] and the receiver unit [14] (see col. 4, lines 17-36). In this embodiment, Baumann does not include at least one light guide, which is arranged outside the monitoring region, and which connects the transmitter unit with the receiver unit, for the transmission of the synchronization signal. However, Baumann teaches, in the background of the invention, that the synchronization of the light transmitters and receivers can take place over a connecting line between the light transmitter row and the receiver row (referenced to DE 24 09 113 B2; see col. 1, lines 18-21). Therefore, to implement the system of Baumann with a light guide or lead to connect the transmitter unit with the receiver unit of the system of Baumann for the transmission of the

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synchronization signal would have been obvious to a person skilled in the art. Furthermore, to arrange such a light guide or lead outside the monitoring region to avoid the signal interference would have been deemed within a preview of a person skilled in the art.

With respect to claim 5, Baumann discloses, in Figs. 1-2 and 5-7, that permitted object sizes and/or movements of an object [42 or 43] (see Figs. 5 ad 6) located in the monitoring region are learned by a control unit [20] (see Fig. 1).

Allowable Subject Matter

5. Claims 3-4 and 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- A light grid for detecting objects characterized in that the light guide connects the first or last light transmitter of the transmitter unit to the first or last light receiver of the receiver unit respectively, in combination with the remaining claimed limitations as called for in claim 3 (claim 4 would be allowable since it is dependent on claim 3);
- A method for operating a light grid to detect objects in a monitoring region characterized in that a switch or alarm signal is only emitted when a predetermined minimum number of light receivers adjacent one another do not report any reception and an object located in the monitoring region thus exceeds a predetermined minimum size, in combination with the remaining claimed limitations as called for in claim 9 (claim 10 would be allowable since it is dependent on claim 9).

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Remarks and conclusion

7. Applicant's arguments with respect to claims 1, 6, and 12 have been considered but are moot in view of the new ground(s) of rejection.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/16/2005



**THUY V. TRAN
PRIMARY EXAMINER**